

IN THE CLAIMS

We claim:

Sub
A1
1. An apparatus comprising:

an opaque plate;
a central opening disposed in said opaque plate; and
at least one peripheral opening disposed away from said central opening in said opaque plate.

2. The apparatus of claim 1 wherein said central opening is circular.

3. The apparatus of claim 1 wherein said at least one peripheral opening comprises at least one annular opening.

4. The apparatus of claim 1 wherein said at least one peripheral opening comprises four openings equidistant from said central opening.

5. The apparatus of claim 1 wherein said at least one peripheral opening further comprises a filter.

6. An apparatus comprising:

a source of light;

optical elements; and

an aperture, said aperture comprising:

an opaque plate;

a central opening disposed in said opaque plate; and

at least one peripheral opening disposed away from said

central opening in said opaque plate.

7. The apparatus of claim 6 wherein said central opening is circular.

8. The apparatus of claim 6 wherein said at least one peripheral opening comprises at least one annular opening.

9. The apparatus of claim 6 wherein said at least one peripheral opening comprises four openings equidistant from said central opening.

10. The apparatus of claim 6 wherein said at least one peripheral opening further comprises a filter.

11. A method comprising:

providing an illumination beam;

forming an on-axis component of said illumination beam;

forming at least one off-axis component of said illumination beam;

combining said on-axis component and said at least one off-axis component into an exposure beam.

12. The method of claim 11 wherein said at least one off-axis component of said illumination beam is annular.

13. The method of claim 11 wherein said at least one off-axis component of said illumination beam is quadrupole.

14. The method of claim 11 further comprising modulating intensity of said at least one off-axis component of said illumination beam.

15. The method of claim 11 further comprising modulating intensity of said on-axis component of said illumination beam.